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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,227	10/17/2005	Arkady Garbar	17706-004US1	6698

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EXAMINER	
NGUYEN, TRI V	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
07/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/518,227	GARBAR ET AL.	
	Examiner	Art Unit	
	TRI V. NGUYEN	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *35-53* is/are pending in the application.

4a) Of the above claim(s) *43 and 47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *35-42,44-46 and 48-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/12/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Upon entry of the amendment filed on 05/12/08, Claim 35 is amended; Claims 43 and 47 are withdrawn and Claims 1-34 are cancelled. The currently pending claims considered below are Claims 35-42, 44-46 and 48-53.

Claim Rejections - 35 USC § 102 & 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 35, 36, 38, 39, 41, 44, 45, 48, 50-53 stand rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lin.

Lin teaches the process of making particles by treating an alloy of two or three different metals such as copper, nickel, copper, gold with cold work, strip treatment, thermal treatment, leaching agents. Lin further teaches the features of passivating the particles, de-agglomeration and washing prior to collecting the particles. See col 4, line 20 to col. 6, line 57; col 7, lines 27-37 and example 1 on col 8.

Accordingly, the reference of Lin anticipates the material limitations of the listed claims.

In the alternative that the above disclosure is insufficient to anticipate the above listed claims such as selection of a specific ingredient or element step, it would have nonetheless been obvious to the skilled artisan to achieve the synthesis methodology, as the reference teaches each of the claimed ingredients for the same utility and such modifications are recognized as being well within the purview of the skilled artisan to yield predictable results.

4. Claims 37 and 40 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lin.

Lin disclose the process of making the particles but however, fails to specifically disclose a process comprising the experimental conditions such as temperature ranges in the amounts as those recited by the Applicant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch,* 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim,* 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff,* 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

5. Claims 42, 46 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Lin as applied to the claims above, and further in view of Khasin et al.

Lin discloses the process of making the particles via a leaching agent but does not explicitly disclose the features of silver based particles, jet mill and basic leaching agent. In an analogous art, Khasin et al. disclose the process of making silver based nanoparticles via the formation of an alloy followed by leaching with a basic ingredient and using a jet mill (col 3, lines 20-35 and patent '535: col 2, lines 20-52). The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

6. Claims 41, 42 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin as applied to the claims above, and further in view of Yadav et al.

Lin discloses the process of making the particles via a leaching agent but does not explicitly disclose the features of a jet mill and various chemical coating reagents. In an analogous art, Yadav et al. disclose the features of a jet mill and the passivation of the surface with various chemicals such as alcohols (parag. 57-64). The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of a skilled artisan. It would have been obvious to a skilled artisan in the nanotechnology art to perform experimental conditions optimization is recognized as part of the ordinary capabilities of the skilled artisan.

Response to Arguments

7. Applicant's arguments filed 05/12/08 have been fully considered but they are not persuasive.

Applicants argue that the cited references do not teach the step of de-agglomerating the coated nano powders (pages 6 and 7). The examiner respectfully disagrees as the Lin reference teach the de-agglomeration step by disclosing the steps of passivating (coating) about each particle and collecting the free particles via extraction from the surrounding the matrix followed by rinsing to remove any unwanted contaminants (col 5, line 50 to col 6, line 4 and col 6, line 53 to col 7, line 8).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRI V. NGUYEN whose telephone number is (571)272-6965. The examiner can normally be reached on M-F 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. V. N./
Examiner, Art Unit 1796
July 22, 2008

/Mark Kopec/
Primary Examiner, Art Unit 1796